



IFWO

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/733,816

DATE: 08/27/2004

TIME: 16:54:18

Input Set : N:\Crf3\RULE60\10733816.raw
 Output Set: N:\CRF4\08272004\J733816.raw

1 <110> APPLICANT: Harrison, Stephen D.
 2 Hall, John A.
 3 Calderon-Cacia, Maria
 4 Zhong, Ziyang
 5 Fang, Eric Y.
 6 Coit, Doris G.
 7 Nguyen, Steve H.
 8 Medina-Selby, Angelica
 9 <120> TITLE OF INVENTION: GSK3 POLYPEPTIDES
 10 <130> FILE REFERENCE: 59516-162/PP-15876.002/200130.524
 11 <140> CURRENT APPLICATION NUMBER: US/10/733,816
 12 <141> CURRENT FILING DATE: 2003-12-10
 13 <150> PRIOR APPLICATION NUMBER: US/10/211,412
 14 <151> PRIOR FILING DATE: 2002-07-31
 15 <150> PRIOR APPLICATION NUMBER: US09/916,109
 16 <151> PRIOR FILING DATE: 2001-07-25
 17 <160> NUMBER OF SEQ ID NOS: 11
 18 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 20 <210> SEQ ID NO: 1
 21 <211> LENGTH: 420
 22 <212> TYPE: PRT
 23 <213> ORGANISM: Homo sapiens
 24 <400> SEQUENCE: 1
 Met Ser Gly Arg Pro Arg Thr Thr Ser Phe Ala Glu Ser Cys Lys Pro
 1 5 10 15
 Val Gln Gln Pro Ser Ala Phe Gly Ser Met Lys Val Ser Arg Asp Lys
 20 25 30
 Asp Gly Ser Lys Val Thr Thr Val Val Ala Thr Pro Gly Gln Gly Pro
 35 40 45
 Asp Arg Pro Gln Glu Val Ser Tyr Thr Asp Thr Lys Val Ile Gly Asn
 50 55 60
 Gly Ser Phe Gly Val Val Tyr Gln Ala Lys Leu Cys Asp Ser Gly Glu
 65 70 75 80
 Leu Val Ala Ile Lys Lys Val Leu Gln Asp Lys Arg Phe Lys Asn Arg
 85 90 95
 Glu Leu Gln Ile Met Arg Lys Leu Asp His Cys Asn Ile Val Arg Leu
 100 105 110
 Arg Tyr Phe Phe Tyr Ser Ser Gly Glu Lys Lys Asp Glu Val Tyr Leu
 115 120 125
 Asn Leu Val Leu Asp Tyr Val Pro Glu Thr Val Tyr Arg Val Ala Arg
 130 135 140
 His Tyr Ser Arg Ala Lys Gln Thr Leu Pro Val Ile Tyr Val Lys Leu
 145 150 155 160

ENTERED

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```

45 Tyr Met Tyr Gln Leu Phe Arg Ser Leu Ala Tyr Ile His Ser Phe Gly
46 165 170 175
47 Ile Cys His Arg Asp Ile Lys Pro Gln Asn Leu Leu Leu Asp Pro Asp
48 180 185 190
49 Thr Ala Val Leu Lys Leu Cys Asp Phe Gly Ser Ala Lys Gln Leu Val
50 195 200 205
51 Arg Gly Glu Pro Asn Val Ser Tyr Ile Cys Ser Arg Tyr Tyr Arg Ala
52 210 215 220
53 Pro Glu Leu Ile Phe Gly Ala Thr Asp Tyr Thr Ser Ser Ile Asp Val
54 225 230 235 240
55 Trp Ser Ala Gly Cys Val Leu Ala Glu Leu Leu Leu Gly Gln Pro Ile
56 245 250 255
57 Phe Pro Gly Asp Ser Gly Val Asp Gln Leu Val Glu Ile Ile Lys Val
58 260 265 270
59 Leu Gly Thr Pro Thr Arg Glu Gln Ile Arg Glu Met Asn Pro Asn Tyr
60 275 280 285
61 Thr Glu Phe Lys Phe Pro Gln Ile Lys Ala His Pro Trp Thr Lys Val
62 290 295 300
63 Phe Arg Pro Arg Thr Pro Pro Glu Ala Ile Ala Leu Cys Ser Arg Leu
64 305 310 315 320
65 Leu Glu Tyr Thr Pro Thr Ala Arg Leu Thr Pro Leu Glu Ala Cys Ala
66 325 330 335
67 His Ser Phe Phe Asp Glu Leu Arg Asp Pro Asn Val Lys His Pro Asn
68 340 345 350
69 Gly Arg Asp Thr Pro Ala Leu Phe Asn Phe Thr Thr Gln Glu Leu Ser
70 355 360 365
71 Ser Asn Pro Pro Leu Ala Thr Ile Leu Ile Pro Pro His Ala Arg Ile
72 370 375 380
73 Gln Ala Ala Ala Ser Thr Pro Thr Asn Ala Thr Ala Ala Ser Asp Ala
74 385 390 395 400
75 Asn Thr Gly Asp Arg Gly Gln Thr Asn Asn Ala Ala Ser Ala Ser Ala
76 405 410 415
77 Ser Asn Ser Thr
78 420
80 <210> SEQ ID NO: 2
81 <211> LENGTH: 394
82 <212> TYPE: PRT
83 <213> ORGANISM: Homo sapiens
84 <400> SEQUENCE: 2
85 Met Glu Tyr Met Pro Met Glu Gly Gly Met Ser Gly Arg Pro Arg
86 1 5 10 15
87 Thr Thr Ser Phe Ala Glu Ser Cys Lys Pro Val Gln Gln Pro Ser Ala
88 20 25 30
89 Phe Gly Ser Met Lys Val Ser Arg Asp Lys Asp Gly Ser Lys Val Thr
90 35 40 45
91 Thr Val Val Ala Thr Pro Gly Gln Gly Pro Asp Arg Pro Gln Glu Val
92 50 55 60
93 Ser Tyr Thr Asp Thr Lys Val Ile Gly Asn Gly Ser Phe Gly Val Val
94 65 70 75 80

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95  Tyr Gln Ala Lys Leu Cys Asp Ser Gly Glu Leu Val Ala Ile Lys Lys
96          85           90           95
97  Val Leu Gln Asp Lys Arg Phe Lys Asn Arg Glu Leu Gln Ile Met Arg
98          100          105          110
99  Lys Leu Asp His Cys Asn Ile Val Arg Leu Arg Tyr Phe Phe Tyr Ser
100         115         120         125
101  Ser Gly Glu Lys Lys Asp Glu Val Tyr Leu Asn Leu Val Leu Asp Tyr
102         130         135         140
103  Val Pro Glu Thr Val Tyr Arg Val Ala Arg His Tyr Ser Arg Ala Lys
104         145         150         155         160
105  Gln Thr Leu Pro Val Ile Tyr Val Lys Leu Tyr Met Tyr Gln Leu Phe
106         165         170         175
107  Arg Ser Leu Ala Tyr Ile His Ser Phe Gly Ile Cys His Arg Asp Ile
108         180         185         190
109  Lys Pro Gln Asn Leu Leu Asp Pro Asp Thr Ala Val Leu Lys Leu
110         195         200         205
111  Cys Asp Phe Gly Ser Ala Lys Gln Leu Val Arg Gly Glu Pro Asn Val
112         210         215         220
113  Ser Tyr Ile Cys Ser Arg Tyr Tyr Arg Ala Pro Glu Leu Ile Phe Gly
114         225         230         235         240
115  Ala Thr Asp Tyr Thr Ser Ser Ile Asp Val Trp Ser Ala Gly Cys Val
116         245         250         255
117  Leu Ala Glu Leu Leu Leu Gly Gln Pro Ile Phe Pro Gly Asp Ser Gly
118         260         265         270
119  Val Asp Gln Leu Val Glu Ile Ile Lys Val Leu Gly Thr Pro Thr Arg
120         275         280         285
121  Glu Gln Ile Arg Glu Met Asn Pro Asn Tyr Thr Glu Phe Lys Phe Pro
122         290         295         300
123  Gln Ile Lys Ala His Pro Trp Thr Lys Val Phe Arg Pro Arg Thr Pro
124         305         310         315         320
125  Pro Glu Ala Ile Ala Leu Cys Ser Arg Leu Leu Glu Tyr Thr Pro Thr
126         325         330         335
127  Ala Arg Leu Thr Pro Leu Glu Ala Cys Ala His Ser Phe Phe Asp Glu
128         340         345         350
129  Leu Arg Asp Pro Asn Val Lys His Pro Asn Gly Arg Asp Thr Pro Ala
130         355         360         365
131  Leu Phe Asn Phe Thr Thr Gln Glu Leu Ser Ser Asn Pro Pro Leu Ala
132         370         375         380
133  Thr Ile Leu Ile Pro Pro His Ala Arg Ile
134         385         390
136 <210> SEQ ID NO: 3
137 <211> LENGTH: 361
138 <212> TYPE: PRT
139 <213> ORGANISM: Homo sapiens
140 <400> SEQUENCE: 3
141  Met Glu Tyr Met Pro Met Glu Gly Gly Ser Lys Val Thr Thr
142          1           5           10          15
143  Val Val Ala Thr Pro Gly Gln Gly Pro Asp Arg Pro Gln Glu Val Ser
144          20          25          30

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Input Set : N:\Crf3\RULE60\10733816.raw
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```

145 Tyr Thr Asp Thr Lys Val Ile Gly Asn Gly Ser Phe Gly Val Val Tyr
146 35 40 45
147 Gln Ala Lys Leu Cys Asp Ser Gly Glu Leu Val Ala Ile Lys Lys Val
148 50 55 60
149 Leu Gln Asp Lys Arg Phe Lys Asn Arg Glu Leu Gln Ile Met Arg Lys
150 65 70 75 80
151 Leu Asp His Cys Asn Ile Val Arg Leu Arg Tyr Phe Tyr Ser Ser
152 85 90 95
153 Gly Glu Lys Asp Glu Val Tyr Leu Asn Leu Val Leu Asp Tyr Val
154 100 105 110
155 Pro Glu Thr Val Tyr Arg Val Ala Arg His Tyr Ser Arg Ala Lys Gln
156 115 120 125
157 Thr Leu Pro Val Ile Tyr Val Lys Leu Tyr Met Tyr Gln Leu Phe Arg
158 130 135 140
159 Ser Leu Ala Tyr Ile His Ser Phe Gly Ile Cys His Arg Asp Ile Lys
160 145 150 155 160
161 Pro Gln Asn Leu Leu Asp Pro Asp Thr Ala Val Leu Lys Leu Cys
162 165 170 175
163 Asp Phe Gly Ser Ala Lys Gln Leu Val Arg Gly Glu Pro Asn Val Ser
164 180 185 190
165 Tyr Ile Cys Ser Arg Tyr Tyr Arg Ala Pro Glu Leu Ile Phe Gly Ala
166 195 200 205
167 Thr Asp Tyr Thr Ser Ser Ile Asp Val Trp Ser Ala Gly Cys Val Leu
168 210 215 220
169 Ala Glu Leu Leu Gly Gln Pro Ile Phe Pro Gly Asp Ser Gly Val
170 225 230 235 240
171 Asp Gln Leu Val Glu Ile Ile Lys Val Leu Gly Thr Pro Thr Arg Glu
172 245 250 255
173 Gln Ile Arg Glu Met Asn Pro Asn Tyr Thr Glu Phe Lys Phe Pro Gln
174 260 265 270
175 Ile Lys Ala His Pro Trp Thr Lys Val Phe Arg Pro Arg Thr Pro Pro
176 275 280 285
177 Glu Ala Ile Ala Leu Cys Ser Arg Leu Leu Glu Tyr Thr Pro Thr Ala
178 290 295 300
179 Arg Leu Thr Pro Leu Glu Ala Cys Ala His Ser Phe Phe Asp Glu Leu
180 305 310 315 320
181 Arg Asp Pro Asn Val Lys His Pro Asn Gly Arg Asp Thr Pro Ala Leu
182 325 330 335
183 Phe Asn Phe Thr Thr Gln Glu Leu Ser Ser Asn Pro Pro Leu Ala Thr
184 340 345 350
185 Ile Leu Ile Pro Pro His Ala Arg Ile
186 355 360
188 <210> SEQ ID NO: 4
189 <211> LENGTH: 483
190 <212> TYPE: PRT
191 <213> ORGANISM: Homo sapiens
192 <400> SEQUENCE: 4
193 Met Ser Gly Gly Gly Pro Ser Gly Gly Gly Pro Gly Gly Ser Gly Arg
194 1 5 10 15

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195 Ala Arg Thr Ser Ser Phe Ala Glu Pro Gly Gly Gly Gly Gly Gly
 196 20 25 30
 197 Gly Gly Gly Pro Gly Gly Ser Ala Ser Gly Pro Gly Gly Thr Gly Gly
 198 35 40 45
 199 Gly Lys Ala Ser Val Gly Ala Met Gly Gly Gly Val Gly Ala Ser Ser
 200 50 55 60
 201 Ser Gly Gly Pro Gly Gly Ser Gly Gly Gly Ser Gly Gly Pro
 202 65 70 75 80
 203 Gly Ala Gly Thr Ser Phe Pro Pro Gly Val Lys Leu Gly Arg Asp
 204 85 90 95
 205 Ser Gly Lys Val Thr Thr Val Val Ala Thr Leu Gly Gln Gly Pro Glu
 206 100 105 110
 207 Arg Ser Gln Glu Val Ala Tyr Thr Asp Ile Lys Val Ile Gly Asn Gly
 208 115 120 125
 209 Ser Phe Gly Val Val Tyr Gln Ala Arg Leu Ala Glu Thr Arg Glu Leu
 210 130 135 140
 211 Val Ala Ile Lys Lys Val Leu Gln Asp Lys Arg Phe Lys Asn Arg Glu
 212 145 150 155 160
 213 Leu Gln Ile Met Arg Lys Leu Asp His Cys Asn Ile Val Arg Leu Arg
 214 165 170 175
 215 Tyr Phe Phe Tyr Ser Ser Gly Glu Lys Lys Asp Glu Leu Tyr Leu Asn
 216 180 185 190
 217 Leu Val Leu Glu Tyr Val Pro Glu Thr Val Tyr Arg Val Ala Arg His
 218 195 200 205
 219 Phe Thr Lys Ala Lys Leu Thr Ile Pro Ile Leu Tyr Val Lys Val Tyr
 220 210 215 220
 221 Met Tyr Gln Leu Phe Arg Ser Leu Ala Tyr Ile His Ser Gln Gly Val
 222 225 230 235 240
 223 Cys His Arg Asp Ile Lys Pro Gln Asn Leu Leu Val Asp Pro Asp Thr
 224 245 250 255
 225 Ala Val Leu Lys Leu Cys Asp Phe Gly Ser Ala Lys Gln Leu Val Arg
 226 260 265 270
 227 Gly Glu Pro Asn Val Ser Tyr Ile Cys Ser Arg Tyr Tyr Arg Ala Pro
 228 275 280 285
 229 Glu Leu Ile Phe Gly Ala Thr Asp Tyr Thr Ser Ser Ile Asp Val Trp
 230 290 295 300
 231 Ser Ala Gly Cys Val Leu Ala Glu Leu Leu Gly Gln Pro Ile Phe
 232 305 310 315 320
 233 Pro Gly Asp Ser Gly Val Asp Gln Leu Val Glu Ile Ile Lys Val Leu
 234 325 330 335
 235 Gly Thr Pro Thr Arg Glu Gln Ile Arg Glu Met Asn Pro Asn Tyr Thr
 236 340 345 350
 237 Glu Phe Lys Phe Pro Gln Ile Lys Ala His Pro Trp Thr Lys Val Phe
 238 355 360 365
 239 Lys Ser Arg Thr Pro Pro Glu Ala Ile Ala Leu Cys Ser Ser Leu Leu
 240 370 375 380
 241 Glu Tyr Thr Pro Ser Ser Arg Leu Ser Pro Leu Glu Ala Cys Ala His
 242 385 390 395 400
 243 Ser Phe Phe Asp Glu Leu Arg Cys Leu Gly Thr Gln Leu Pro Asn Asn

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 08/27/2004
PATENT APPLICATION: US/10/733,816 TIME: 16:54:19

Input Set : N:\Crf3\RULE60\10733816.raw
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:11; Xaa Pos. 2,3,4

VERIFICATION SUMMARY DATE: 08/27/2004
PATENT APPLICATION: US/10/733,816 TIME: 16:54:19

Input Set : N:\Crf3\RULE60\10733816.raw
Output Set: N:\CRF4\08272004\J733816.raw

L:464 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0